

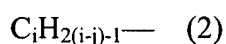
## AMENDMENTS TO THE CLAIMS

**This listing of claims will replace all prior versions and listings of claims in the application:**

### **LISTING OF CLAIMS:**

1. (original): A polymer emitting fluorescence in the solid state, having a polystyrene-reduced weight-average molecular weight of  $10^3$  to  $10^8$  and having a repeating unit selected from the group consisting of arylene group, divalent heterocyclic group and divalent aromatic amine group, wherein the polymer has an unsaturated hydrocarbon group free of aromatic ring at least at one terminal end of the main chain thereof with being directly coupled with any of the repeating units.

2. (original): A polymer according to Claim 1, wherein the unsaturated hydrocarbon group free of aromatic ring is a group represented by formula (2) and being free of aromatic ring:

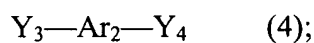
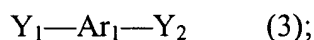


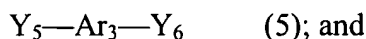
wherein,  $i$  is an integer of 5 or more, and  $j$  is an integer satisfying the range of  $0 \leq j < i/2$ .

3. (original): A polymer according to Claim 2, wherein  $i$  is 8 and  $j$  is any one of 0, 1 or 2 in formula (2).

4. (currently amended): A polymer according to ~~any one of Claims 1 to 3~~Claim 1, wherein the unsaturated hydrocarbon group free of aromatic ring is cyclooctadienyl group.

5. A method for producing the polymer according to ~~any one of Claims 1 to 4~~Claim 4, wherein at least one monomer selected from the group consisting of the following formula (3), (4) and (5) is subjected to reaction with a compound represented by the following formula (6):





wherein  $Ar_1$ ,  $Ar_2$  and  $Ar_3$  each independently represents arylene group, divalent heterocyclic group and divalent aromatic amine group;  $E_1$  represents an unsaturated hydrocarbon group free of aromatic ring;  $Y_1$ ,  $Y_2$ ,  $Y_3$ ,  $Y_4$ ,  $Y_5$  and  $Y_6$  each independently represents a leaving group; and  $Y_7$  represents a hydrogen atom or a leaving group.

6. (original): A method for producing the polymer according to Claim 5, wherein a monomer of which  $Y_1$ ,  $Y_2$ ,  $Y_3$ ,  $Y_4$ ,  $Y_5$  and  $Y_6$  is each independently a halogen atom, an alkylsulfonyloxy group or an arylsulfonyloxy group, and  $Y_7$  is a hydrogen atom, a halogen atom, an alkylsulfonyloxy group or an arylsulfonyloxy group, is subjected to reaction in the presence of Ni(0) complex.

7. (currently amended): A method for producing the polymer according to Claim 5 or 6, wherein  $Y_7$  is hydrogen atom and  $E_1$  is a group containing two or more unsaturated bonds.

8. (original): A method for producing the polymer according to Claim 7, wherein a compound represented by formula (6) is cyclooctadiene and an amount of the cyclooctadiene is 100 to 300 % by mole based on the total amount of monomers represented by formulas (3), (4) and (5).

9. (currently amended): A polymer produced by ~~any one of the methods according to any one of Claims 5 to 8~~ the method according to Claim 5.

10. (currently amended): A polymer composition comprising a polymer having a polystyrene-reduced number-average molecular weight of  $10^3$  to  $10^8$  and emitting fluorescence in the solid state, and the polymer according to ~~any one of Claim 1 to 4 and Claim 9~~ Claim 1.

11. (currently amended): A polymer composition comprising two or more polymers according to ~~any one of Claims 1 to 4 and Claim 9~~ Claim 1.

12. (currently amended): A polymer light emitting device comprising a light emitting layer disposed between an anode electrode and a cathode electrode, wherein the light emitting layer comprises ~~the~~ a polymer emitting fluorescence in the solid state, the polymer having a polystyrene-reduced weight-average molecular weight of  $10^3$  to  $10^8$  and having a repeating unit selected from the group consisting of arylene group, divalent heterocyclic group and divalent aromatic amine group, wherein the polymer has an unsaturated hydrocarbon group free of aromatic ring at least at one terminal end of the main chain thereof with being directly coupled with any of the repeating units~~according to any one of Claim 1 to 4 and Claim 9 or the~~ a polymer composition according to comprising a polymer having a polystyrene-reduced number-average molecular weight of  $10^3$  to  $10^8$  and emitting fluorescence in the solid state~~Claim 10 or 11.~~

13. (original): A flat light source comprising the polymer light emitting device according to Claim 12.

14. (original): A segment display comprising the polymer light emitting device according to Claim 12.

15. (original): A dot matrix display comprising the polymer light emitting device according to Claim 12.

16. (original): A liquid crystal display comprising a backlight composed of the polymer light emitting device according to Claim 12.